

Amendments to the SPECIFICATION:

Without prejudice, please amend without prejudice the Substitute Specification as follows:

Please insert the following text at the beginning of line 2 of page 1 of the Substitute Specification:

--A plurality of restraint systems, which should protect the occupants in the event of an accident, are presently used in some vehicles. Vehicle/vehicle accidents, roll-over accidents, side crashes, and other accident situations are predominantly covered. A plurality of sensors are utilized to recognize such accidents. The sensors are essentially configured for the purpose of recording kinematic variables such as acceleration. Appropriate ignition means are ignited in the event of too high an acceleration or too high a speed. But pre-crash systems are also known. A radar sensor, for example, which is installed on the bumper in the horizontal direction, monitors the surroundings and is to recognize future accident situations, restraint systems being triggered as a function of the signal of such a pre-crash sensor.

A different, less safety-critical system is based on ultrasonic sensor technology which is used for a parking aid. Such "parking sensors" assist the driver during the parking operation and emit a warning signal when adjacent vehicles or other obstacles are too close. The range of these sensors is approximately 70 cm to 1 m. A future object of passive protection is the expansion of pedestrian protection. Some strategies for pedestrian protection have already been mentioned, contact-based sensors in the bumper area being predominantly used. But radar-based sensors and other pre-crash sensors may also be used here.

However, it is disadvantageous that the mentioned sensors have absolutely no effect in the event of "truck underrides." The airbag is mostly ineffective here since the mass difference is extremely high and conventional restraining means such as airbags or seat-belt tighteners do not work in these situations. Absent crash crumple zones in a truck and the inadequate conformity of the vehicle contours are to be viewed as reasons for this. In the event of a rear-end impact, the passenger car underrides the rear end of the truck with its front end. In passenger car/passenger car accidents, the crash would begin at the bumper, but not in such underride crashes. As a rule, the first contact with the truck occurs with the hood. Reliable deployment of the restraining means in a timely fashion is no longer possible and the respective sensors send signals insufficient for this purpose.

The risk of getting killed in a collision between a passenger car and a truck is three times greater than in a passenger car/passenger car crash. Two thirds of the killed passenger car occupants lose their lives in head-on collisions with a truck front end.--.

Please insert the following text at the beginning of line 15 of page 1 of the Substitute Specification:

--Therefore, it is provided according to the present invention to generate an additional input signal for restraining means which is to be included in the general underride sensor. A distance measuring device is provided which is aligned vertically to detect such a truck underride. Ultrasonic sensors, or also radar-based sensors, may be used for this purpose. These sensors should preferably be installed in the bumper area. Thus, distance measurement takes place in the z direction. The device according to the present invention should be designed in such a way that it preferably senses over the entire bumper in order to enable detection of this underride as early as possible, even in the event of a skew truck underride. The distance measuring device, i.e., the respective sensors, is typically installed in a vertical position. This results in sensing being possible in the z direction. During normal driving, no obstacle is typically to be detected in the bumper area, so that the sensors send predominantly zero signals. Should an obstacle or a truck appear in this area, the sensor then sends a signal different from zero. In combination with additional signals from different sensors, it may then unambiguously be determined which appropriate restraining means are to be ignited. Processing preferably takes place in a control unit; a possible analysis is also possible in a control unit different from the central airbag. Signals, read in in the control unit, are then appropriately processed in an algorithm and subsequently decide which protective mechanisms are to be activated.--.

Please amend the paragraphs beginning at line 4 of page 3, to line 23 of page 4 of the Substitute Specification, as follows:

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are also known. A radar sensor, for example, which is installed on the bumper in the horizontal direction, monitors the surroundings and is to recognize future accident situations, restraint systems being triggered as a function of the signal of such a pre-crash sensor.

A different, less safety-critical system is based on ultrasonic sensor technology which is used for a parking aid. Such "parking sensors" assist the driver during the parking operation and emit a warning signal when adjacent vehicles or other obstacles are too close. The range of these sensors is approximately 70 cm to 1 m. A future object of passive protection is the expansion of pedestrian protection. Some strategies for pedestrian protection have already been mentioned, contact-based sensors in the bumper area being predominantly used. But radar-based sensors and other pre-crash sensors may also be used here.

However, it is disadvantageous that the mentioned sensors have absolutely no effect in the event of "truck underrides." The airbag is mostly ineffective here since the mass difference is extremely high and conventional restraining means such as airbags or seat-belt tighteners do not work in these situations. Absent crash crumple zones in a truck and the inadequate conformity of the vehicle contours are to be viewed as reasons for this. In the event of a rear-end impact, the passenger car underrides the rear end of the truck with its front end. In passenger car/passenger car accidents, the crash would begin at the bumper, but not in such underride crashes. As a rule, the first contact with the truck occurs with the hood. Reliable deployment of the restraining means in a timely fashion is no longer possible and the respective sensors send signals insufficient for this purpose.

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